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EXAMINER

RALEIGH, DONALD L

ART UNIT	PAPER NUMBER
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2879

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,014	Applicant(s) KUPPER ET AL.	
	Examiner DONALD L. RALEIGH	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION***Response to Amendment***

The Amendment, filed on June 17, 2008 has been entered and acknowledged by the Examiner.

The addition of claims 14-20 has been entered.

Claims 1-20 are pending in the instant application.

Claim Objections

Claims 1, 13-14 and 18 are objected to because of the following informalities:

Claims 1, 13-14 and 18, recite the phrase "farther from the lamp", the recitation renders the claim indefinite since it is unclear where is the point of reference as to what is considered "farther" from the lamp. Appropriate correction is required. For examination purposes the recitation "farther from the lamp" will be considered as a point away from the lamp surface.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5, 8, 10-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigami et al (US PG Pub. No. 2003/0209986) in view of Muto et al (US Patent No. 6,169,367).

Regarding Claim 1, Ishigami discloses, at least in Figure 6, a lamp for a vehicle headlight (Paragraph [0003], lines 9-10), the lamp comprising: a bulb (1) surrounding a light source (2) with a lamp base (5a) at an end of the bulb (1) for supporting the lamp within a reflector (6) of the headlight,

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Ishigami fails to disclose a lamp for a vehicle headlight with at least one lens structure having a boundary surface, wherein at least a portion of the light radiated by the light source towards the reflector is redirected by the boundary surface to a region of the reflector farther from the lamp.

Muto teaches, at least in Figure 1, a lamp (1) for a vehicle headlight (Column 1, lines 14-15) with at least one lens structure (11a) having a boundary surface, wherein at least a portion of the light radiated by the light source towards the reflector (61)(shown in figure 6) passes through the boundary surface (of 11a) and is redirected by the boundary surface (of 11a) to a region of the reflector (61) farther from the lamp. (Figure 3 shows that the lens structure (11a) at the boundary surface redirects light farther from the lamp (1) when it passes through the surface to provide an improved light distribution pattern (Column 2, lines 10-12)).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto, in the headlight of Ishigami to provide an improved light distribution pattern.

Regarding Claim 2, Ishigami fails to exemplify a lamp wherein the lens structure comprises a concave lens.

Muto teaches, at least in Figure 1, a lamp (1) wherein the lens structure (11a) comprises a concave lens (Column 3, lines 52-53) to eliminate spot shaped glare light from the bulb(2) (Column 2, lines 1-9).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

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Regarding Claim 5, Ishigami fails to disclose a lamp wherein the boundary surface is positioned at the upper side or lower side of the bulb.

Muto teaches in Figure 1, a lamp (1) wherein the boundary surface (of the lens structure (11a)) is positioned at the upper side or lower side of the bulb.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

Regarding Claim 8, Ishigami fails to disclose a lamp wherein the lens structure is at least partly integral with the bulb.

Muto teaches in Figure 1, a lamp (1) wherein the lens structure (the concave surface of the bulb) is at least partly integral with the bulb to eliminate spot shaped glare light from the bulb(2) (Column 2, lines 1-9).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

Regarding Claim 10, Ishigami discloses, at least in Figure 6, a lamp wherein the light source (2) comprises a discharge arc (abstract, line 1. The second electrode (2) is behind shield (5b). Figure 8 shows the two electrodes).

Regarding Claim 11, Ishigami discloses, at least in Figure 8, a lamp wherein the lamp comprises a plurality of light sources (2). Figure 8 shows two electrodes (2). There are also two electrodes in Figure 6 but one is behind the shield (5a).

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Regarding Claim 12, Ishigami discloses a lamp wherein the lamp has a low-beam function (Paragraph [0439], line 6).

Regarding Claim 13, Ishigami discloses in Figure 6 a motor vehicle headlight (Paragraph [0003], lines 9-10) comprising: a reflective housing (6); a lamp (5) connected to the reflective housing (6) and positioned at least partially therein, the lamp having a bulb (1), a light source (2), a lamp base (5a), wherein the bulb (1) surrounds the light source (2), wherein the lamp base (5a) is at an end of the bulb (1),

However, Ishigami fails to disclose and at least one lens structure wherein the at least one lens structure has a boundary surface wherein at least a portion of the light radiated by the light source towards the reflective housing passes through the boundary surface and is redirected by the boundary to a region of the reflective housing farther from the lamp.

Muto teaches in Figure 1, a lamp (1) with a lens structure (11a) which has a boundary surface wherein at least a portion of the light radiated by the light source (3) towards the reflective housing is redirected by the boundary surface (11a) to a region farther from the lamp (1). Figure 3 of Muto teaches that the light that passes through the boundary surface would be redirected farther from the lamp and Figure 6 shows a reflector (61) that could be used with the lamp of Figure 1 in order to eliminate spot shaped glare light from the bulb (Column 2, lines 1-9).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

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Regarding Claim 15, Ishigami discloses in Figure 6, the headlight (Paragraph [0003], lines 9-10) wherein the lamp (5) is an elongated structure positioned centrally with respect to the reflective housing (6),

Ishigami fails to disclose and wherein the at least one lens structure is formed along the bulb.

Muto teaches in Figure 1, a lamp (1) with a lens structure (11a) formed along the bulb to eliminate spot shaped glare light from the bulb (2) (Column 2, lines 1-9).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

Regarding Claim 16, Ishigami discloses in Figure 6, the headlight wherein the reflective housing (6) is a concave structure, but fails to disclose wherein the at least one lens structure is formed only along a portion of the bulb.

Muto teaches, at least in Figure 1, a lamp wherein the lens structure (11a) is formed only along a portion of the bulb (2) in order to eliminate spot shaped glare light from the bulb (Column 2, lines 1-9).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

Regarding Claim 17, Ishigami fails to exemplify the headlight wherein the at least lens structure comprises at least one of a concave lens and a prism.

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Muto teaches, at least in Figure 1, a lamp wherein the lens structure (11a) comprises a concave lens (Column 3, lines 52-53) in order to eliminate spot shaped glare light from the bulb (Column 2, lines 1-9).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

Claims 3-4 , 6-7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigami (986) in view of Muto (367) and further in view of Trentelman (US Patent No. 6,676,472).

Regarding Claims 3 and 4, Ishigami, as modified by Muto, fails to exemplify a lamp wherein the lens structure comprises a prism.

Trentelman discloses in Figure 7 an envelope body (52) with a lens structure (64) consisting of a plurality of prisms which could be used for the lamp of Ishigami that is inserted in the lamp base and reflector of Ishigami to incorporate as much light directing capability into the light source as possible (Column 1, lines 56-61).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Trentelman, in the lamp and reflector of Ishigami, as modified by Muto, to incorporate as much light directing capability into the light source as possible.

Regarding Claim 6, Ishigami, as modified by Muto, fails to exemplify a lamp wherein at least a portion of the lens structure is in proximity to the lamp base.

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Trentelman discloses in Figure 7 an envelope body (52) with a lens structure (64) that extends from end to end (either of which could be the base end) which could be used for the lamp of Ishigami that is inserted in the lamp base and reflector of Ishigami to incorporate as much light directing capability into the light source as possible (Column 1, lines 56-61).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Trentelman, in the lamp of Ishigami, as modified by Muto, to incorporate as much light directing capability into the light source as possible.

Regarding Claim 7, Ishigami, as modified by Muto, fails to exemplify a lamp, wherein the lens structure extends from the lamp base to a central region of the light source.

Trentelman discloses in Figure 7 an envelope body (52) with a lens structure (64) that extends from the base to a central region (either end of which could be the base end) which could be used for the lamp of Ishigami that is inserted in the lamp base and reflector of Ishigami in order to incorporate as much light directing capability into the light source as possible (Column 1, lines 56-61).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Trentelman, in the lamp of Ishigami, as modified by Muto, to incorporate as much light directing capability into the light source as possible.

Regarding Claim 14, Ishigami, as modified by Muto, fails to exemplify the headlight wherein the at least one lens structure is a plurality of lens structures defining an array of

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boundary surfaces, wherein each surface of the array of boundary surfaces redirects the light radiated by the light source to a region of the reflective housing farther from the lamp.

Trentelman teaches in Figure 7 wherein the at least one lens structure (64) is a plurality of lens structures (contains a plurality of prisms) defining an array of boundary surfaces (see Figure 7), wherein each surface of the array of boundary surfaces redirects the light radiated by the light source (when combined with the light source of Ishigami) to a region of the reflective housing (of Ishigami) farther from the lamp. Column 6, lines 10-16 teaches the redirecting process of these lenses in order to incorporate as much light directing capability into the light source as possible (Column 1, lines 56-61).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Trentelman, in the lamp and reflector of Ishigami, as modified by Muto, to incorporate as much light directing capability into the light source as possible.

Claims 9 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigami (986) In view of Muto (367) and further In view of Kinouchi (US PG Pub. No. 2002/0039289) and van der Leeuw et al (US Patent No. 5,471,110).

Regarding Claim 9, Ishigami, as modified by Muto, fails to exemplify a lamp wherein the light source comprises a filament.

Kinouchi teaches, in Figure 1, a lamp wherein the light source comprises a filament (2)(Paragraph [0019], line 2).

Furthermore, van der Leeuw teaches that using a filament electrode can eliminate the end coat required by conventional electrodes and that they are easier to handle and can reduce lamp to lamp variations in photometric parameters (Column 10, lines 53-64).

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It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the filament light source, as taught by Kinouchi, in the lamp of Ishigami, as modified by Muto, in order to eliminate the end coat required by conventional electrodes and because they are easier to handle than conventional electrodes and can reduce lamp to lamp variations in photometric parameters.

Regarding Claim 18, Ishigami discloses in Figure 6, a motor vehicle headlight (Paragraph [0003], lines 9-10) comprising: a reflective housing (6); and a lamp (5) connected to the reflective housing and positioned at least partially therein, the lamp having a bulb (1),

Ishigami fails to disclose a lens structure defining an array of boundary surfaces a filament light source, wherein the bulb surrounds the filament light source, and wherein at least a portion of the light radiated by the light source towards the reflective housing passes through the array of boundary surfaces and is redirected by each surface of the array of boundary surfaces to a region of the reflective housing farther from the lamp.

Kinouchi teaches, in Figure 1, a lamp wherein the light source comprises a filament (2)(Paragraph [0019], line 2) wherein the bulb surrounds the filament light source, but fails to teach wherein at least a portion of the light radiated by the light source towards the reflective housing passes through the array of boundary surfaces and is redirected by each surface of the array of boundary surfaces to a region of the reflective housing farther from the lamp.

Furthermore, van der Leeuw teaches that using a filament electrode can eliminate the end coat required by conventional electrodes and that they are easier to handle and can reduce lamp to lamp variations in photometric parameters (Column 10, lines 53-64).

Muto teaches, at least in Figure 1, a lens structure (11a) defining an array of boundary surfaces (top and bottom), wherein the bulb (2) surrounds the light source (3), and wherein at

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least a portion of the light radiated by the light source (3) passes through the array of boundary surfaces and is redirected by each surface of the array of boundary surfaces to a region farther from the lamp in order to eliminate spot shaped glare light from the bulb (Column 2, lines 1-9). (Figure 3 shows that the light would be redirected by the lamp surface).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto and the filament light source of Kinouchi, which can eliminate the end coat of conventional electrodes and can reduce lamp to lamp variations in photometric parameters and to combine both with the reflector and base of Ishigami in order to eliminate spot shaped glare light from the bulb.

Regarding Claim 19, Ishigami fails to exemplify the headlight wherein at least one surface of the array of boundary surfaces is defined by a concave lens or a prism.

Muto teaches, at least in Figure 1, a lamp wherein the lens structure (11a) comprises a concave lens (Column 3, lines 52-53) in order to eliminate spot shaped glare light from the bulb (Column 2, lines 1-9).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

Regarding Claim 20, Ishigami discloses in Figure 6, the headlight (Paragraph [0003], lines 9-10) wherein the lamp (5) is positioned centrally with respect to the reflective housing (6), wherein the reflective housing (6) is a concave structure (see Figure 6).

Ishigami fails to disclose wherein the lens structure is formed along the bulb.

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Muto teaches, at least in Figure 1, a lamp wherein the lens structure (11a) is formed along the bulb in order to eliminate spot shaped glare light from the bulb (Column 2, lines 1-9).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the lens structure, as taught by Muto into the headlight of Ishigami in order to eliminate spot shaped glare light from the bulb.

Response to Arguments

Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment of the independent claims has necessitated a new search and a new basis of rejection, therefore:

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONALD L. RALEIGH whose telephone number is (571)270-3407. The examiner can normally be reached on Monday-Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald L Raleigh/
Examiner, Art Unit 2879

/Mariceli Santiago/
Primary Examiner, Art Unit 2879